



Department of Conservation & Recreation
CONSERVING VIRGINIA'S NATURAL & RECREATIONAL RESOURCES

Virginia Natural Heritage E-News

Conserving Virginia's Biodiversity through Inventory, Protection and Stewardship **Fall 2001**

DEEP RUN PONDS - VIRGINIA'S 32ND STATE NATURAL AREA PRESERVE

DCR purchased the 668-acre Edwards tract at Deep Run Ponds, Rockingham County, on August 10th. This acquisition is a landmark conservation accomplishment for DCR. The property includes eight globally rare sinkhole pond communities, three of which support the globally rare Virginia sneezeweed (*Helenium virginicum*, G2/S2/LT/LE). The Shenandoah Valley sinkhole ponds comprise one of Virginia's most unusual and conservation-worthy ecosystems. Other rare species in the system include the Black-fruited spikerush (*Eleocharis melanocarpa* G4/S2), Northern St. John's-wort (*Hypericum boreale* G5/S2), Buxbaum's sedge (*Carex buxbaumii* G5/S2), Blackfoot quillwort (*Isoetes melanopoda* G5/S1?), and Torrey's bullrush (*Shoenoplectus torreyi* G5/S1). The origin of this natural area protection project dates back more than 10 years when the first landowner contact was made and negotiations began between the Edwards family and The Nature Conservancy, which assisted on this project in several critical stages.

Deep Run Ponds is the 32nd state Natural Area Preserve, the preserve system now encompasses 19,395 acres.

IMPORTANT ADDITION TO THE STATE NATURAL AREA PRESERVE SYSTEM

On July 17, DCR added 66.72 acres to The Cedars Natural Area Preserve <http://www.dcr.state.va.us/dnh/cedars.htm> in Lee County. This addition contains a globally significant limestone woodland that supports nine rare species, and is a critical addition to the larger

limestone woodland, glade and karst complex. The Cedars Natural Area Preserve now contains 709 acres with the recent Smith tract addition.

SIGNIFICANT NATURAL COMMUNITY AND RARE PLANTS FOUND IN BOTETOURT COUNTY

Two globally rare species, Addison's leatherflower (*Clematis addisonii* G2/S2) and smooth coneflower (*Echinacea laevigata* G2/S2) were discovered in early May in a beautiful montane dry calcareous forest community dominated by such species as chinkapin oak (*Quercus muhlenbergii*), Shumard oak (*Quercus shumardii*), and shagbark hickory (*Carya ovata*) on land owned by Westvaco in Botetourt Co.. The habitat looked interesting in the winter, but is truly amazing now. Although the population of *Echinacea* is small, the *Clematis* is quite abundant (700+ plants). American gromwell (*Lithospermum latifolium* G4/S2) was also found on the property in a separate habitat.

RARE BUTTERFLY POPULATIONS FOUND IN WESTERN VIRGINIA'

Two new sites have been found with populations of the rare Appalachian Grizzled Skipper, *Pyrgus wyandot* (G2S2), in Alleghany County by Natural Heritage zoologists. Between seven and nine individuals were seen on a ruffed grouse management area owned by the U.S. Forest Service. Additionally, two individuals were seen on property owned by the Westvaco Corporation. Prior to these observations, *P. wyandot* had been seen at only three other locations in Virginia in the last seven years.

CONTINUED BOTANICAL DISCOVERIES IN WESTERN VIRGINIA

DNH botanists continue to uncover new occurrences of rare plants on property owned by Westvaco Corporation in Botetourt county. During the past week, approximately 450 individuals of the federally endangered smooth coneflower (*Echinacea laevigata* - G2/S2) and over 50 individuals of Virginia false-gromwell (*Onosmodium virginianum* - G4/S2) were discovered in a dry calcareous woodland already known to contain small amounts of smooth coneflower and a very large population of Addison's leatherflower (*Clematis addisonii* - G2/S2). Additionally, three new populations of American gromwell (*Lithospermum latifolium* - G4/S2), one new population of smooth coneflower, and three significant natural communities were located elsewhere on the same property.

SMALL WHORLED POGONIA FOUND AT QUANTICO

A new occurrence of the rare woodland orchid, small whorled pogonia (*Isotria medeoloides*), was located last week at Marine Corps Base Quantico (Quantico) in Prince William County. This species is listed Threatened under the Federal Endangered Species Act and Endangered under the Virginia Endangered Plant and Insect Act. Quantico is a stronghold for the species in Virginia, and several other occurrences are known from the installation. The new occurrence consists of just two individuals. One individual showed evidence of having flowered this year, but no fruit was produced

RARE PLANTS DISCOVERED IN SOUTHEASTERN VIRGINIA

The first known population of *Rhynchospora stenophylla* (coastal bog beaksedge – G4) in Virginia was discovered in an open, herb - dominated seepage in Southampton county. This species has a spotty range and is naturally uncommon to rare in the deep South, with its northernmost outpost supposedly in southeastern

North Carolina. This new discovery extends that range approximately 180 miles to the north. This delicate species could easily be overlooked in its grass and sedge – dominated habitats, making the discovery of more populations in Southeastern Virginia possible.

New populations of *Thalictrum macrostylum* (small-leaved meadowrue – G3G4, S1) and *Cleistes divaricata* (spreading pogonia – G4, S1) were also discovered in open seepage habitats in Greensville and Southampton counties, Virginia. The *Thalictrum* population in Greensville county consisted of approximately 20 flowering individuals, but only one individual of *Cleistes* was located at the Southampton county site

NEW POPULATION OF SHALE-BARREN ROCKCRESS LOCATED

A small occurrence of *Arabis serotina* (shale-barren rockcress) was located last week in Alleghany County near Covington. This species is listed Endangered under both the Federal Endangered Species Act and the Virginia Endangered Plant and Insect Act. The species was located on land owned by Westvaco and was found as part of a rare species inventory for that timber company.

FINALIZATION OF PAMUNKEY RIVER CLASSIFICATION & INVENTORY

A final report and GIS package titled "A plant community classification and natural heritage inventory of the Pamunkey River floodplain" was submitted to the Environmental Protection Agency this July. The report summarized inventory work completed over three field seasons from 1998 to 2000 and included new significant natural heritage occurrences, a plant community classification of approximately 40 community types, and coarse and fine resolution vegetation maps of the Pamunkey River System.

VEGETATION MAPPING AND CLASSIFICATION PROJECT ON NATIONAL PARK LANDS

Chris Ludwig and Dean Walton attended a planning meeting at the Chimborazo Visitor Center in Richmond with researchers from North Carolina State and the National Park Service for a cooperative project to map and classify vegetation on seven national parks in Virginia. The parks involved include Booker T. Washington NHS, Richmond National Battlefield Park, Appomattox Courthouse NHS, Petersburg National Battlefield Park, Fredericksburg and Spotsylvania NMP, Colonial National Monument, and George Washington's Birth Place NM. This multi-year project involves the production of digital maps based on remotely sensed data and a vegetation classification based on plot data. Draft products will be refined based on results of an intermediate accuracy assessment and the final deliverables will be statistically assessed for accuracy in the field as well.

FORT PICKETT ZOOLOGICAL SURVEY COMPLETED

A final report detailing two years of zoological surveys for rare fauna on Ft. Pickett – Maneuver Training Center has been completed. Six Natural Heritage monitored species were found including the federal and state endangered Roanoke Logperch (*Percina rex*), the state threatened Atlantic Pigtoe (*Fusconaia masoni*), and the state rare Dwarf Waterdog (*Necturus punctatus*), Smokey Ruby-spot (*Hetaerina titia*), Blackwater Bluet (*Enallagma weewa*), and Southern Sprite (*Nehalennia integricollis*). Fifteen species on the DCR-DNH animal watchlist were also documented. Management and protection needs were also discussed.

MANASSAS NATIONAL BATTLEFIELD PARK PLANT LIST COMPLETED

A Natural Heritage Technical Report containing a list of the vascular plants of Manassas National Park (MNBP) has been completed for the National Park Service. The list was compiled

from field notes and specimens taken during the course of fieldwork at MNBP prior to 2000 and from fieldwork conducted by Field Botanist Allen Belden and Ecologist Gary Fleming in 2000 specifically for the project. A total of 706 plant taxa were observed, including 16 pteridophytes, 4 gymnosperms, 186 monocot angiosperms, and 500 dicot angiosperms. Six plants that are rare in Virginia are on the list.²⁷

CAMP PENDLETON NATURAL HERITAGE INVENTORY REPORT COMPLETED

The final report on the reassessment of the rare species and an evaluation of the significant natural communities at the Naval Amphibious Base Little Creek South Virginia Beach Annex (Camp Pendleton) was completed. This one-year inventory reassessed the status of rarities documented in a previous inventory by DCR-DNH in 1989-90. The state rare plants bog rush (*Juncus elliotii*) (G4G5/S1S2), fasciculate beakrush (*Rhynchospora fascicularis* var. *fascicularis*) (G5T4?/S1?) and American lipocarpha (*Lipocarpha maculata*) (G5/S1), found in previous surveys, were relocated. One new rare plant species, long beach seedbox (*Ludwigia brevipes*) (G4G5/S2), was found in the 2000 inventory. No rare animal species were documented but survey time was limited and weather conditions often unfavorable. In addition, the natural vegetation communities were evaluated and vegetation plots were sampled: two significant Interdune Pond communities were identified. Management and protection recommendations were provided in the report.

SINKHOLE POND REPORT FOR COLONIAL NATIONAL HISTORICAL PARK

The final report, A Biological Survey of the Coastal Plain Depression Ponds (sinkholes) of Colonial National Historical Park, Yorktown, Virginia, was submitted to the National Park Service. Surveys during 1999 and 2000 included ground-truthing of potential depression pond habitat, documentation of animal and plant rarities and significant natural communities as

well as complete species lists for each area determined to be a sinkhole. Nine sites were determined to contain seasonal wetlands meeting the definition developed for the project. One wetland supported the state listed (threatened) Mabee's salamander (*Ambystoma mabeei*) (G4/S1S2) and 5 wetlands contained significant natural communities: 4 with Coastal Plain Depression Pond (G?/S1) community types and one with a Non-Riverine Wet Hardwood Forest community (G?/S1. The project area adjoins the Grafton Ponds Natural Area Preserve owned by the City of Newport News.

PRESENTATION TO PAMUNKEY RIVER WETLANDS PARTNERS

DNH staff presented the results of their inventory, community classification, and mapping work on the Pamunkey River Wetlands at a Nature Conservancy-organized meeting of locality planners, conservation agencies, and landowners on June 22. This work has been funded through a grant from EPA. The final report will contain a community classification for the region as well as conservation site descriptions. Another product will be a set of CDs distributed to conservation partners containing detailed ecological communities mapping information for the Pamunkey wetlands, as well as other GIS data that can serve planners and conservation advocates in their efforts to protect the Pamunkey's natural assets.

SAINT FRANCIS' SATYR CONSERVATION PLAN

The Division of Natural Heritage recently completed a conservation plan for the Saint Francis' satyr (*Neonympha mitchellii francisci*), a federally endangered species. The globally endangered butterfly has only been documented in two counties in North Carolina and one county in Virginia, and the Virginia occurrence was not discovered until 1998. The conservation plan summarizes the ecology of the species as it is currently understood, presents information on each of the sites where the species occurs in

Virginia, and provides recommendations for the protection and management of the species in Virginia. All documented sites for the St. Francis satyr in the state are privately owned; therefore, conservation of the species will require working closely with the landowners to ensure wise stewardship of these sites.

SOUTHEASTERN WETLANDS GIS PROJECT CONCLUDES

The final report has been prepared for an EPA-funded project, *Development of a Comprehensive GIS Database for the North Landing/Northwest Rivers Wetlands Ecosystem*. This project, which provided the initial impetus and funding for dedicated GIS staff in Natural Heritage, involved assembly and distribution of GIS data as well as detailed mapping of the area's ecological communities. An educational poster was produced which describes the resources and their protection needs; it can be viewed at <http://www.dcr.state.va.us/dnh/posters>. All of the products are available digitally on a set of CDs being distributed to Virginia Beach and Chesapeake planners and conservation advocates.

FINAL MEETING FOR SWAMP - PRESENTATION OF CONSERVATION PLAN

On the evening of 6/14/2001, the Natural Heritage Information Manager and Stewardship Biologist participated in a final meeting with the Cities of Chesapeake and Virginia Beach as a final deliverable component of the SWAMP (Southern Watersheds Area Management Program) project. Project consultants (DCR, Virginia Tech, Siemon & Larsen, Landmark Design) presented their findings to Planning Departments, City Councils, City Managers, and Advisory Groups from both Cities, as well as the Hampton Roads Planning District Commission. The "Conservation Plan for the Southern Watershed Area" authored by DCR-DNH, as well as other consultant's reports, were well received.

FINAL SWAMP CONSERVATION PLAN COMPLETED

The Conservation Plan for the Southern Watershed Area was completed and submitted to Hampton Roads Planning District Commission (HRPDC) on March 21, 2001. Submission of this document fulfills the DCR-Natural Heritage contractual role of developing this Plan as a key part for the Southern Watershed Area Management Program (SWAMP). The product is intended to assist the Cities of Chesapeake and Virginia Beach, as well as the HRPDC, with long-term planning to protect natural resources, open space, and water quality.

DNH TO ASSIST DEQ WITH DATA FOR REVIEW OF WETLANDS DEVELOPMENT APPLICATIONS

DNH staff met with DEQ staff to discuss their needs for natural heritage data, which will be required for proper review of wetlands development notifications and applications under new wetland regulations published by DEQ for implementation October 1, 2001. DNH proposed to develop a password-secured Internet application, with funding assistance from DEQ, that would allow DEQ staff to screen projects for their proximity to natural heritage resources. This would reduce the tremendous increased workload on DNH Project Review that might otherwise be required by the new regulations. DEQ is considering our proposal.

NORTHEASTERN BEACH TIGER BEETLE POPULATION MONITORING

During July, the Chesapeake Bay Region Steward and Summer Intern monitored population status for Northeastern beach tiger beetles at Natural Area Preserves flanking the Chesapeake Bay. Mid-summer is a peak activity period for adults of this federally threatened species, and populations are monitored annually at this time to establish trends, detect change in population health and habitat status, and abate threats. Populations were monitored at Bethel Beach, Hughtlett Point and Dameron Marsh during the

first week of July, and Eastern Shore populations were monitored during the week of July 9.

VIRGINIA NATURAL AREAS STEWARDSHIP FORUM

Stewardship Staff from DCR's Natural Heritage Program and The Nature Conservancy's Virginia Field Office met over two days (6/26-27) to focus on five key areas of concern for natural areas managers and to share stewardship experiences, perspectives, and outlooks with the hope of developing improved approaches for addressing challenging issues. Issues discussed were Outreach and Education, Prescribed Burning, Conservation Planning, Ecological Restoration, and Invasive Species. The forum consisted of small breakout sessions with each group presenting ideas on a number of discussion points for each session topic. An array of innovative ideas were generated which may prove useful in the on-going management of natural areas in Virginia.

FIRE REFRESHER COURSE HELD IN CHARLOTTESVILLE

On Thursday, April 5, the Division of Natural Heritage (DNH) and The Nature Conservancy (TNC) hosted a one-day Fire Refresher training course at the Ivy Creek Nature Center in Charlottesville. Approximately 25 staff members from TNC, DNH, and the Division of State Parks were represented. Topics covered included fire ecology, prescribed fire operations, wildfire suppression tactics, safety, and pump and engine operations. Participants also completed the physical fitness test that is mandatory for fireline duty.

NATURAL HERITAGE PRESCRIBED BURN WRAP-UP

Thursday, May 30 saw DCR-Natural Heritage and Nature Conservancy staff work cooperatively to complete prescribed burns on two dedicated natural area preserves in southeast VA, each with the objective of enhancing habitat for rare fire-adapted plant species. Burns were successfully

conducted at Blackwater Ecological Preserve in Isle of Wight County, and at Chub Sandhill Natural Area Preserve in Sussex County. With the on-set of wetter and more humid summertime conditions, these may be the last prescribed burns of the current growing season. If drier conditions return during June, NH staff may have the opportunity to assist State Parks staff in completing planned burns at Sailor's Creek Battlefield and Staunton River State Parks.

WRECK ISLAND NATURAL AREA PRESERVE COLONIAL BIRD NESTING ACTIVITY

On Thursday, May 24, NH staff (Chesapeake Bay Steward, Eastern Operations Steward) and Nature Conservancy - Virginia Coast Reserve staff posted signs to protect colonial nesting birds at Wreck Island NAP. This barrier island preserve on Virginia's Eastern Shore is a critical nesting area for many species of shore birds, including an exceptionally large colony of Black Skimmers (G5S2). These birds lay eggs in shallow nests in the sand in exposed areas. Camouflaged nests and eggs are vulnerable to human disturbance as they are easily overlooked and trampled. Signs were posted around colonies to inform boaters that the area is off-limits during nesting season. Over 500 Black Skimmers were observed on the south end of Wreck Island.

PRESCRIBED BURNING PAYING-OFF AT CHERRY ORCHARD BOG

On Friday, 6/15/01, the NH Stewardship Manager and Staff Botanist inspected rare plant occurrences at International Paper's Cherry Orchard Bog natural area in Sussex County, one year following a NH-conducted prescribed burn. Controlled burns, made possible by an on-going written agreement between DCR and the landowner, are now being used to improve this habitat by returning the process of fire that historically helped maintain these types of natural communities and their high local diversity. The May 2000 burn has resulted in improved conditions for "sun-loving," moisture-dependant

rare plants. Known populations of species such as bog-buttons, slender nutrush, and large white fringed orchid appear robust and on the increase. A rare species not previously known from the site, *Asclepias rubra* (red milkweed), was observed for the first time in an area that prior to burning had been occupied by thick woody vegetation. More discoveries likely await at this important managed site.

NATURAL HERITAGE COMPLETES INVASIVE PLANT STUDY AND REPORT

NH Staff, led by the Stewardship Biologist, Natural Areas Vegetation Ecologist, and Botanist recently completed a new three-part study of invasive plants in Virginia. The study was conducted in response to the American Seed Trade Association (ASTA) request that DCR remove 11 commercially-important species from the advisory list of Invasive Alien Plant Species in Virginia. The study consisted of (1) newly revised invasive plant ranking criteria with a critical analysis of the invasive tendencies of each of the 11 species in question, (2) multivariate analysis of plant characteristics, and (3) analysis of data from 2,000 vegetation plots located throughout the state. Study results indicate strong evidence for continued listing of 10 of the 11 species as invasive, but do not support listing of bermudagrass (*Cynodon dactylon*) as biologically invasive. Copies of the report were forwarded on 7/2/01 to ASTA and their legal counsel. The report may be reviewed and/or downloaded from the DCR - Natural Heritage Program website.

INVASIVE SPECIES CONTROL EFFORTS ON NATURAL AREA PRESERVES

Recent invasive species control efforts on Natural Area Preserves have focused on *Sorghum halapense* (Johnson grass) and *Ailanthus altissima* (Tree-of-Heaven). The Chesapeake Bay steward and the Chesapeake Bay assistant applied herbicide to Johnson grass - infested areas of an abandoned agricultural field at Savage Neck Dunes in Northhampton County, and in another project, the State Natural Area Steward and the

Western Operations Steward completed similar control measures in an abandoned agricultural field at Cowbane Prairie Natural Area Preserve in Augusta County. Invasive monitoring plots for Tree-of-Heaven were also completed at Pedlar Hills NAP in Montgomery County.

INVASIVE SPECIES WORKDAY HELD AT PEDLAR HILLS NAP

On Saturday, June 2, the Western Operations Steward and the State Natural Area Steward led a crew of 7 volunteers in invasive species control activities at Pedlar Hills Natural Area Preserve in Montgomery County. Efforts were directed at controlling the exotic invasive Tree-of-Heaven (*Ailanthus altissima*), which is well established in the eastern portion of the preserve. A variety of mechanical and chemical methods were used to treat between 800-1000 seedlings, saplings, and mature trees.

RESTORATION PROJECTS RECEIVE WHIP FUNDING

Two native warm-season grass restoration projects recently received approval for funding by the Wildlife Habitat Incentive Program, a USDA cost share program administered by the Natural Resources Conservation Service. The 25-acre project at Cowbane Prairie NAP was allocated \$5987 and the 4-acre fescue conversion at Pinnacle NAP received \$349. Both projects are scheduled for planting in mid-May of 2001. In addition to herbicide and seed costs, this external funding will also cover costs associated with prescribed burning, which is a critical component of warm.

PROGRESS ON CONSERVATION AND NAP MANAGEMENT PLANS

A final review draft of the report "Current Status and Conservation Strategy for the Eastern Small-footed Myotis (*Myotis leibii*)" was submitted to the contracting agency (USDA Forest Service) for final review. This small bat is thought to have declined in recent years, and is now recognized as a species of concern across its range. Draft

review comments from researchers and land managers throughout this species' range have been very favorable. Additionally, review drafts of the "Cowbane Prairie NAP Management Plan" have been distributed to a multi-agency management planning advisory team as well as to in-house reviewers. This plan is scheduled for completion during summer of 2001 after comments are returned and included.

PINNACLE NATURAL AREA PRESERVE IMPROVEMENTS COMPLETED

Several improvements have been completed at the Pinnacle Natural Area Preserve, some of which were requested by Director Brickley and Delegate Dillard after visits last summer and fall. These improvements include;

- 1-Directional signs w/DCR logo at all turns between Lebanon, VA and Pinnacle NAP
- 2-Repairs to the swinging bridge
- 3-Erosion control and stabilization of trail from Phase II down to the waterfalls
- 4-"Pack out your trash" signs in high visibility areas
- 5-"Please Close Lid" signs in SST

A kiosk is planned for installation at the Phase II area parking lot after all equipment associated with trail project is removed. This kiosk will provide an information platform for visitors.

Alternative Spring Break Students Work on Pinnacle Improvements

An alternative Spring Break group from Florida International University recently spent two days at Pinnacle Natural Area Preserve in Russell County completing a variety of site improvement projects. Among other activities, the students cleared Japanese honeysuckle and multiflora rose from fencelines, installed landscape timbers along a walkway, created firebreaks for a restoration project, and installed vehicle barriers adjacent to the main gate to the Preserve. The project was coordinated by the Western Operations Steward and the Southwest Region Steward.

LICHEN & FUNGUS IDENTIFICATION FIELD TRIP

Natural Heritage Ecologist Dean Walton led a lichen and fungus identification field trip to Henricus Park Saturday April 7th. The trip, sponsored by the Richmond Chapter of the Virginia Native Plant Society, was attended by about 10 people.

STEWARDSHIP STAFF LEAD FIELD TRIPS AT DAMERON MARSH, PINNACLE NATURAL AREA PRESERVES

On Saturday, April 28, Chesapeake Bay Region steward Rebecca Wilson led a group of 35 students and faculty from the Virginia Institute of Marine Science on a tour of Dameron Marsh NAP in Northumberland County. Discussion focused on northeastern tiger beetle management, control of *Phragmites*, and wetland restoration. On the same day, Southwest Region steward Claiborne Woodall led a group of about 40 participants on a tour of The Pinnacle NAP in Russell County. This trip was associated with the annual meeting of the Virginia Chapter of The Nature Conservancy held in Abingdon.

FIELD TRIP AT GRASSY HILL NATURAL AREA PRESERVE

On Saturday, May 19, the State Natural Area Steward led a group of eight interested participants from the Blue Ridge Wildflower Society on a botany and forest ecology field trip to Grassy Hill NAP in Franklin County. Discussion focused on plant identification, soils and geology, fire ecology, and vegetation management in powerline corridors.

KID'S FISHING DAY HELD AT PINNACLE NATURAL AREA PRESERVE

On Saturday, May 19, approximately 1200 visitors attended the annual Kid's Fishing Day event at Pinnacle Natural Area Preserve in Russell County. This annual event is sponsored by the Clinch Mountain Wildlife Association, the Department of Game and Inland Fisheries, (DGIF) and DCR. Many of the young anglers

appreciated the rainbow trout that were recently stocked in Big Cedar Creek by DGIF. The Southwest Region Steward and the Western Operations Steward were on-site to assure that the event ran smoothly.

PROJECT UNDERGROUND

On July 19 the Natural Heritage Karst Education Coordinator represented DCR at a weeklong graduate class on environmental education using the natural resource programs, Projects Underground, WET, WILD and Learning Tree. The class was held by James Madison University for k-6th grade teachers. DCR and Project Underground participated with the other agencies and programs. The teachers really enjoyed receiving information on karst geology and the special land management issues in karst areas. The class also toured Endless Caverns, thanks to Wade Berdeaux who is presently serving on the Cave Board and who's family owns Endless Caverns.

CAVE CONSERVANCY OF THE VIRGINIAS GRANT

The Division of Natural Heritage received at \$10,000 grant this week from the Cave Conservancy of the Virginias (CCV). This grant will fund a Virginia Tech study to sample and characterize sawdust in various stages of decomposition to determine its suitability as a soil supplement for mine land reclamation, as mulch product or possibly for other uses. The results from the characterization project will support the multi agency efforts to remove the decomposing sawdust which has lead to severe impairment of Batie Springs and Creek in Lee County.

BUSH MILL STREAM NATURAL AREA PRESERVE FIELD TRIP

On Saturday, June 2, the Chesapeake Bay Steward assisted with a TNC- sponsored field trip to Bush Mill Stream NAP. The group launched from Cooper Landing on the Great Wicomico River and traveled by canoe and kayak to the

upper end of Bush Mill Stream. Stops were made along the way to discuss coastal plain habitats, wetland ecology and Natural Area Preserve dedication and stewardship approaches. The group returned to a small landing on the preserve for lunch.

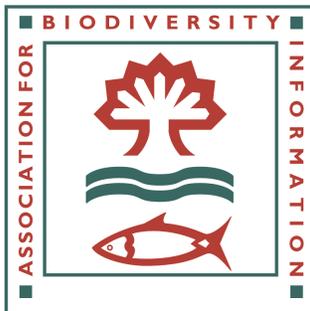
James S. Gilmore, III, Governor

*Ron Hamm
Secretary of Natural Resources*

*David G. Brickley, Director
Department of Conservation & Recreation*

**Virginia Department of Conservation and
Recreation**

Division of Natural Heritage
217 Governor Street
Richmond, VA 23219-2010
PHONE: 804/786-7951
FAX: 804/371-2674
WEBSITE:
www.dcr.state.va.us/dnh



Knowledge to Protect the Diversity of Life
WWW.ABI.ORG

STAFF

Tom Smith, Division Director
Allen Belden, Field Botanist
David Boyd, GIS Database Developer
Steve Carter-Lovejoy, Information Manager
Anne Chazal, Field Zoologist
Al Cire, Western Operations Steward
Phil Coulling, Natural Area Vegetation Ecologist
Kathy Derge, Field Zoologist
Sandra Erdle, Stewardship Biologist
Joseph Fagan, Karst Protection Specialist
Vonne Fagan, Program Support Technician
Dorothy Field, Eastern Shore Regional Steward
Gary Fleming, Vegetation Ecologist
Kevin Heffernan, Stewardship Biologist
Chris Hobson, Natural Area Zoologist
Rhonda Houser, Data Management Specialist
Curtis Hutto, State Natural Areas Steward
René Hypes, Project Review Coordinator
Pat Jarrell, Business Manager
Terri Killeffer, Data Management Specialist
Phil Koury, Eastern Operations Steward
Mike Leahy, Mountain Region Steward
Beth Locklear, Locality Liaison
Darren Loomis, Stewardship Assistant
Chris Ludwig, Chief Biologist
Faye McKinney, Administrative Assistant
Cathy Milholen, Information Specialist
Rick Myers, Stewardship Manager
Wil Orndorff, Karst Protection Specialist
Dorothy Palmer, Digitizing Assistant
Karen Patterson, Field Ecologist
Gina Pisoni, Zoology Technician
Steve Roble, Zoologist
Megan Rollins, Database Manager
Delphenia Rooks, Project Review Assistant
Holly Sepety, Data Management Intern
Larry Smith, Natural Areas Protection Manager
Johnny Townsend, Botanist
Nancy VanAlstine, Field Botanist
Laura Vaught, Project Review Assistant
Dean Walton, Field Ecologist
Joe Weber, GIS Projects Manager
Irv Wilson, Natural Areas Protection Assistant
Rebecca Wilson, Chesapeake Bay Region Steward
Claiborne Woodall, Fire Manager
Craig Young, Southeast Region Steward
Carol Zokaites, Project Underground Coordinator
Vacant - Digitizing Specialist
Vacant, Natural Area Conservation Planner
Vacant – Central Virginia Operations Steward

November 7, 2001